inequalities

$$\int_{\tau}^{\infty}\left[\sum_{i=1}^{r} u_i^2(t)\right]^{1/2} dt \leq \mu(\tau), \qquad (3)$$

$$\int_{\tau}^{\infty}\left[\sum_{i=1}^{l} v_i^2(t)\right]^{1/2} dt \leq \nu(\tau), \qquad (4)$$

Constraints (3),~(4) are considered as constraints on the impulses of control responses. Under the assumption that the pursued knows the coordinates $Y_i(\tau)$ and $Z_i(\tau)$ and the bounds $\mu(\tau)$ and $\nu(\tau)$ at every instant $t = \tau > 0$ and the pursuer knows the values of $Y_i(\tau)$, $Z_i(\tau + 0)$, $\mu(\tau)$, $\nu(\tau + 0)$, and $\nu(\tau + 0)$, but the next motion of the opponents is not known to either one, the control

$$u(\tau) = \xi^0[y(\tau), z(\tau + 0), \mu(\tau), \nu(\tau + 0), v(\tau + 0)],$$

is sought which ensures an encounter of the two objects no matter what control

$$v(\tau) = \eta[y(\tau), z(\tau + 0), \mu(\tau), \nu(\tau + 0), v(\tau + 0)]$$

is chosen. It is considered that the control $u = \xi^0$ together with the control $v = \eta^0$ constitute a pair of optimal controls if: 1) at $Y = \xi^0$ and $v = \eta^0$, an en-

L 29186-66

ACC NR: AP6017846 O

counter of y(t) and z(t) will certainly take place at a certain instant $t = \theta^\circ$; 2) in case θ_v deviates from η°, the encounter takes place not later than at $t = \theta^\circ$. The possibilities of solving the defined problem are discussed on the basis of dynamic programming methods and on the concept of attainability domains for processes (1) and (2) introduced in the author's article [Tekhnicheskaya kibernetika, no. 4, 1965]. The difficulties appearing here are indicated and the means for overcoming them are analyzed. The presented approach to the solution of the pursuit problem is illustrated by a simple example. Orig. art. has: 26 equations. [LK]

SUB CODE: 20, 12/SUBM DATE: 02Feb66/ ORIG REF: 003/ OTH REF: 001/ ATD PRESS: 5004

Card 3/3 BLG

L 43132-66 EWT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(l) BC
ACC NR: AP6014166 SOURCE CODE: UR/0376/65/001/012/1551/1556

AUTHOR: Krasovskiy, N. N.

45
B

ORG: Sverdlovsk Section, Mathematical Institute im. V. A. Steklov (Sverdlovskoye otdeleniye, Matematicheskiy institut)

14

TITLE: The observation of a linear dynamic system and equations with delayed arguments

SOURCE: Differentsial'nyye uravneniya, v. 1, no. 12, 1965, 1551-1556

TOPIC TAGS: linear differential equation, dynamic system, linear automatic control system

ABSTRACT: The author discusses the connection between the problem of observation of a linear dynamical system and the problem of canonical representation of the motion describable by differential equations with time delay. The vector differential equation

$$\dot{x}(t) = Ax(t), \qquad (1)$$

(with x an n-dimensional vector, and A-a(n x n) a constant matrix) describes a linear dynamic system and the quantity $\eta(t)$ which is observed to be connected with the vector x(t) through

$$\eta(t) = p'x(t), \qquad (2)$$

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ACC NR: AP6014166 O

where p is a constant n-vector. The results show that for any vector function x(t) representing a solution of Eq. (1), the function η (t) is the solution of equation

$$\dot{\eta}(t) = \sum_{i=1}^{m} a_i \eta(t - \tau_i). \qquad (3)$$

where a_i are constants defined by $a_i = \gamma^\circ(-\tau_i + 0) - \gamma^\circ(-\tau_i - 0)$, $\gamma^\circ(\vartheta)$ is a sectionally constant function; and τ_i is the time delay. The inverse is generally not true. Orig. art. has: 33 formulas.

SUB CODE: 12,20/ SUBM DATE: 15Jun65/ ORIG REF: 005/ OTH REF: 001

Card 2/2 af

L 44170-66 EWT(d)/EWP(1) IJP(c)

ACC NR: AP6010535 SOURCE CODE: UR/0376/66/002/003/0299/0308

AUTHORS: Krasovskiy, N. N.; Kurzhanskiy, A. B. 39 B

ORG: Ural State University (Ural'skiy gosudarstvennyy universitet)

TITLE: Toward the question of the observability of systems with time delay

SOURCE: Differentsial'nyye uravneniya, v. 2, no. 3, 1966, 299-308

TOPIC TAGS: control system, control theory, differential equation, system analysis, time, time optimal control, dynamic system, COORDINATE SYSTEM

ABSTRACT: A study is made of operations separating the unstable coordinates of a linear second-order system with delay according to admissible observation of a linear combination of phase coordinates. The work is related to the class of problems on the controllability and observability of dynamic systems. The observation problem is formulated for the system

$$\frac{dx_1}{dt} = a_{11}x_1(t) + a_{12}x_2(t) + b_{11}x_1(t-h) + b_{12}x_2(t-h),$$
$$\frac{dx_2}{dt} = a_{21}x_1(t) + a_{22}x_2(t) + b_{21}x_1(t-h) + b_{22}x_2(t-h), \quad (1.1)$$

with constant coefficients and a constant delay $h > 0$. The solution $[x_1(t), x_2(t)]$ of

Card 1/2 UDC: 517.949.22

L 44170-66

ACC NR: AP6010535

such a system for $t \geq t_0 = 0$ is determined by means of initial vector functions $\varphi(t) = \{\varphi_1(t), \varphi_2(t)\}$, given on the initial time interval $[-h, 0]$. A linear operation is defined in general terms, and it is shown that this type of operation can be useful in determining system observability along a coordinate or a linear combination of coordinates. The necessary condition is stated in the theorem: The system (1.1) is observable along the coordinate $y_i(t)$, $(i = 1, \ldots, k)$ in that case and only in that case where

$$b_1 d_1^{(i)} + b_2 d_2^{(i)} \neq 0.$$

The numbers $d_1^{(i)}$ and $d_2^{(i)}$ are components of vectors $d^{(i)}$, which are solutions of the systems

$$(\bar{A} + \bar{B}\exp(-\lambda_i h) - \lambda_i E) d^{(i)} = 0 \quad (i = 1, \ldots, k),$$

and $y_i(t)$ is a coordinate separated through application of the investigated operation. The necessity condition is proved and sufficiency follows from the proof given. Orig. art. has: 31 equations.

SUB CODE: 12/ SUBM DATE: 31Jul65/ ORIG REF: 005

KS

Card 2/2

L 46558-66 EWT(d) IJP(c)

ACC NR: AP6012540 SOURCE CODE: UR/0040/66/030/002/0209/0225

AUTHOR: Krasovskiy, N. N. (Sverdlovsk)

5
B

ORG: none

TITLE: Problem of pursuit in the case of linear single type objects

SOURCE: Prikladnaya matematika i mekhanika, v. 30, no. 2, 1966, 209-225

TOPIC TAGS: control theory, control system, control optimization, minimax strategy

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ABSTRACT: The problem on the minimax of time T until the meeting of the pursuing motion y(t) and the pursued motion x(t) is studied. The two motions involved obey the relationships

$$dy/dt = Ay + Bu, \qquad dz/dt = Az + Bv,$$

where y,z are n-dimensional vectors of the phase coordinates of controlled objects; u, v are the r-vectors of control forces; A, B are constant matrices for the respective measures. This problem was stated by N. N. Krasovskiy, Yu. M. Repin, and V. Ye. Tret'yakov (O nekotorykh igrovykh situatsiyakh v teorii upravlyayemykh sistem. Izv. AN SSSR, Tekhnicheskaya kibernetika, 1965, No. 4). A simple rule is established for the case on finding u and v such that $\min_u \max_v T = \max_v \min_u T$ with the condition $y(\tau - T) = z(\tau - T)$ where τ is the current moment in time. This rule is of

Card 1/2

L 8429-65 EWT(d)/EPF(n)-2 Pg-4/Pk-4/Pl-4/Po-4/Pq-4/Pu-4 IJP(c)/ASD(f)/ESD(dp)
WW/BC

ACCESSION NR: AP4043291 S/0040/64/028/004/0716/0724

AUTHOR: Krasovskiy, N. N. (Sverdlovsk) B

TITLE: On the approximation of one problem of the analytic design of regulators in a system with a time lag

SOURCE: Prikladnaya matematika i mekhanika, v. 28, no. 4, 1964, 716-724

TOPIC TAGS: regulator design, time lag system, optimal control, optimal control approximation, Bellman equation

ABSTRACT: The problem of optimizing control by minimizing the standard error is studied in control systems described by the equation

$$\frac{dx}{dt} = Ax(t) + Bx(t-\tau) + bu, \qquad (1)$$

where x is an n-dimensional vector of phase coordinates, u is a scalar control action, $\tau > 0$ is a constant delay and A, B, and b are constant matrices. The optimal control u^* in system (1) was deter-

Card 1/3

mined earlier by the author in the form of a linear functional containing functions α_i and β_i (Prikladnaya matematika i mekhanika, 1962, v. 26, no. 1). Since the process of determining α_i and β_i is complicated, the author proposes to approximate this problem by the analogous problem for the control system described by the ordinary differential equations

$$\frac{dy^{(i)}}{dt} + my^{(i)} = my^{(i-1)}$$

$$\frac{dy^{\circ}}{dt} = Ay^{\circ} + By^{(m)} + bu \qquad (i = 1, \ldots, m) \tag{2}$$

where m is a positive integer, y° and $y^{(i)}$ are n-dimensional vectors, and A, B, and b are the same matrices as in equation (1). The optimal control ξ° for the control system (2) was derived in the form of a linear functional containing functions $\alpha_i^{(m)}$ and $\beta_i^{(m)}$ by A. M. Letov (Avtomatika i telemekhanika, 1961, v. 22, no. 4) and R. E. Kalman (Proceedings Symposium of Ordinary Differential Equations,

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ACCESSION NR: AP4043291

Mexico City 1959; Bol. Soc. mat. Mexicana, 1960, v. 5). Functions $\alpha_i^{(m)}$ and $\beta_i^{(m)}$ can be calculated by integrating ordinary differential equations. The author first establishes the relation between the solution x(t) of (1) and the solution y*(t) of (2) when $m \to \infty$. He proves that the optimal motion y** uniformly converges to the optimal motion x* for all initial values to <T and for all initial allowable control functions. On the basis of this fact it is also proved with Bellman's equation that the optimal control ξ^* converges to the optimal control η^*. The theories proved establish the convergence of solutions of an auxiliary problem to the solutions of the initial problem. Orig. art. has: 41 formulas.

ASSOCIATION: none

SUBMITTED: 14Apr64 ATD PRESS: 3102 ENCL: 00

SUB CODE: MA, IE NO REF SOV: 010 OTHER: 004

Card 3/3

ACC NR: AP6033208 SOURCE CODE: UR/0040/66/030/005/0938/0938

AUTHOR: Krasovskiy, N. N. (Sverdlovsk)

ORG: none

TITLE: Controlling a plant which is subject to aftereffect

SOURCE: Prikladnaya matematika i mekhanika, v. 30, no. 5, 1966, 938

TOPIC TAGS: linear control system, automatic control parameter, feedback automatic control, mathematic matrix

ABSTRACT: This paper examines the problem of damping a linear system with the aftereffect (lag) $\frac{dx(t)}{dt} = Ax(t) + Gx(t-\tau) + bu$, which is required to be transferred by control $u = u(t)$ from a given initial state $x(t) = x^0(t)$ $(-\tau \leqslant t \leqslant 0)$ into the equilibrium state $x(t) \equiv 0$ $(T - \tau \leqslant t \leqslant T)$. The author studies the simplest case where x is a two-dimensional vector, u is a scalar, A and G are constant matrices, and b is a constant vector; in addition it is assumed that $T = 3\tau$ (τ = const). In this case the problem has an elementary solution. The most meaningful situation is the one where matrix G is nonsingular and vector b is not a specific vector of this matrix. Ultimately

$$\int_0^\tau h_i(0)\, u(0)\, d0 = \tau_i \qquad (i = 1, 2)$$

$$h_1(0) = x_{12}(\tau, 0), \quad h_2(0) = g_{12}\int_0^\tau e^{a_{11}(\tau-\zeta)} x_{12}(\zeta, 0)\, d\zeta + e^{a_{11}\tau} x_{12}(\tau, 0)$$

Card 1/2

ACC NR: AP6033208

is derived. Here $x_{ij}(T, t_o)$ are elements of the fundamental matrix $X[t, t_o]$ of system $dx/dt = Ax$, while γ_1 and γ_2 are found in the familiar way from the initial function $x^o(t)$. For this expression to have the solution $u(\theta)$ with any γ_1 and γ_2 it is necessary and sufficient that functions $h_1(\theta)$ and $h_2(\theta)$ be linearly independent. The latter condition in any case is fulfilled if for A and b the condition of common position is fulfilled, i.e., if vector b is not a specific vector of matrix A. The determination of u(t) from the cited expression is accomplished in the conventional manner. Orig. art. has: 7 formulas.

SUB CODE: 12,09/ SUBM DATE: 27Mar66/ ORIG REF: 002

Card 2/2

ISTOMIN, Pavel Aleksandrovich. Prinimal uchastiye ALEKSEYA, I.V., kand. tekhn. nauk; NEBESNOV, V.I., doktor tekhn. nauk, prof., retsenzent; NAYDENKO, O.K., kand. tekhn. nauk, dots., retsenzent; KRASOVSKIY, O.G., nauchn. red.; GOLUBEVA, N.P., red.; SHAURAK, Ye.N., red.

[Dynamics of marine internal combustion engines] Dinamika sudovykh dvigateley vnutrennego sgoraniia. Leningrad, Sudostroenie, 1964. 287 p. (MIRA 18:2)

KRASOVSKIY, O.P. [Krasovs'kyi, O.P.]

Eventrated dermoid cyst of the ovary. Ped., akush. i gin. 20 no.5:59 '58. (MIRA 13:1)

1. Kafedra fakul'tetskoy khirurgii Chernovetskogo meditsinskogo instituta.

(OVARIES--TUMORS) (CYSTS)

KRASOVSKIY, P.N.

Glumov, G.A. and Krasovskiy, P.N. "The basic features of crossing species of trees in Troitsk National Forest," Part III, "A series of crossings in the sides and downward sloped habitations with black earths," Izvestiya Yestestv.-nauch. in-ta pri Molotvskom gos. un-ta im. Gor'kogo, Vol. XII, Issue 8, 1948, p. 327-49 - Bibliog: 13 items (Part I and II), Uchenyye zapiski Molotovskogo gos. un-ta, Vol. IV, Issue 2, 1945

SO: U-2888, Letopis Zhurnal'nykh Statey, No. 1, 1949

1. GRUMOV, O. A., KRASOVSKIY, P. N.

2. USSR (600)

4. Ural Mountain Region - Birch

7. European white birch on saline soils of the southern trans-Ural region. Les i step', 5, No. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, May 1953, Uncl.

USSR / Weeds and Weed Control N

Abs Jour: Ref Zhur-Biol, 1958, No 17, 77934

Author : ~~Krasovskiy, P. N.~~
Inst : Not given
Title : Pigweed in Zaural (Ecological-Geographical Characteristics).

Orig Pub: Izv. Yestestv.-nauchn. in-ta pri Molotovsk. un-te, 1956, 13, No 9, 147-163

Abstract: Pigweed is a weed of gardens, melon fields, and cultivated crops, as well as of grain sowings. It is most often met in crops that are planted late, as well as in broken seedings, and on badly-cultivated plowlands. Annual conditions promote the spread of the weed, as do its biological peculiarities: the abundant fertile property of the seeds, preserved for a long time;

Card 1/2

KRASOVSKIY, P.N.

From the history of the former Troitsk Forest-Steppe Preserve and its present state. Okhr. prir. na Urale no.1:115-118 '60. (MIRA 14:4)

(Chelyabinsk Province--Agricultural experiment stations)

KRASOVSKIY, P.N.

Experiment in cultivating arboraceous species and shrubs on the Solonetz soils of the former Troitsk Forest Steppe Preserve. Trudy Inst. biol. UFAN SSSR no.19:137-144 '60. (MIRA 13:10)
(Chelyabinsk Province--Afforestation)
(Solonetz soils)

GLUMOV, G.A.; KRASOVSKIY, P.N.

Waste land vegetation of the southern forest steppe of the trans-Ural region and its classification. Trudy Inst. biol. UF AN SSSR no.27:147-157 '61. (MIRA 17:2)

KRASOVSKIY, P.N.

Leonid Nikolaevich Leliukhov's 80th birthday. Okhr.prir.na Urale no.3:167-170 '62. (MIRA 16:6)
(Leliukhov, Leonid Nikolaevich, 1881-)

KRASOVSKIY, P.P.

Characteristics of a channel with tropospheric propagation. Izv. vys.ucheb.zav.; radiotekh. 2 no.5:621-623 S-O '59. (MIRA 13:5)

1. Rekomendovano kafedroy radiopriyemnykh ustroystv Leningradskogo elektrotekhnicheskogo instituta svyazi im.M.A. Bonch-Bruyevicha.
(Information theory)

USSR/Biology, Agricultural - Animal Husbandry Mar 52

"At the 'Lorupe' Sovkhoz," P. Ya. Krasovskiy, Dir "Lorupe" Sovkhoz, Siguldsk Rayon, Latvian SSR

"Nauka i Zhizn'" Vol XIX, No 3, pp 27, 28

The 'Lorupe' Sovkhoz succeeded in raising the average milk production per cow fed on fodder from 2,103 kg (in 1945) to 4,249 kg (in 1950). Following the example of the "Karavayevo" Sovkhoz, the procedure of raising calves at low temps is being launched. Conditions in the Baltic countries differ from the central part of the USSR, because the

216T2

humidity of the air is much higher. Nevertheless, the "Karavayevo" method, which is already being applied rather widely in the central USSR, was successfully used in republics adjacent to the Latvian SSR, where the air is equally humid.

KRASOVSKIY, P. Ya.

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(1036)
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67856
SOV/142-2-5-11/19

AUTHOR: Krasovskiy, R.R.

TITLE: To the Problem of the Characteristics of a Channel With Tropospheric Scattering

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiotekhnika, 1959, Vol 2, Nr 5, pp 621 - 623 (USSR)

ABSTRACT: The author plotted phase and amplitude characteristics of a channel with tropospheric scattering, using B. Jonsephon's and G. Carlson's /Ref 2/ experimental data. The results confirm the correctness of his theoretical method of plotting such characteristics /Ref 1/ In a previous paper /Ref 1/, the author showed that, compared to the input signal, the signal at the channel output is modulated additionally by some random processes. The distribution laws of these processes were selected by the author according to numerous experiments

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To the Problem of the Characteristics of a Channel With Tropospheric Scattering

in the field of tropospheric scattering. He also determined regions of the energy spectrum and phase characteristics at the channel output. The amplitude and phase characteristics of a four-pole may be determined by

$$K(\omega) = \left| \frac{S_2(j\omega)}{S_1(j\omega)} \right| \quad \text{and} \quad \varphi = \arg \frac{S_2(j\omega)}{S_1(j\omega)}$$

Card 2/4 where $S_1(j\omega)$, $S_2(j\omega)$ are the spectrums at the channel input and output. For determining the desired charac-

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SOV/142-2-5-11/19

To the Problem of the Characteristics of a Channel With Tropospheric Scattering

teristics it is necessary to obtain the spectrum of the signal having passed thru the channel to be investigated. A rectangular pulse of approximately 1 microsecond duration was used for this purpose /Ref 2/. The signal shapes at the channel input and output are shown in Figure 1. The pulses were subjected to spectrum analyses. Calculation data for pulse frequencies of 0-1000 kc are given in Table 1. Figure 2 shows the pulse spectrums at the channel input and output, Figure 3-the amplitude-frequency characteristics, and Figure 4 shows the phase-frequency characteristics of the channel. The publication of this article was recommended by the Kafedra radiopriyemnykh ustroystv (Department of Radio Receivers) of the Leningradskiy elektrotekhnicheskiy institut svyazi imeni M.A. Bonch-Bruyevicha (Leningrad Electrical Engineering

Card 3/4

67856

SOV/142-2-5-11/19

To the Problem of the Characteristics of a Channel With Tropospheric Scattering

Institute of Communications imeni M.A. Bonch-Bruyevich).
There are 1 set of graphs, 3 graphs, 1 table and 2 reference, of which 1 is Soviet and 1 American.

SUBMITTED: March 25, 1959

Card 4/4

KRASOVSKIY, R.R.

Signal reception with tropospheric scattering and multiple interference conditions. Izv. vys. ucheb. zav.; radiotekh. 2 no.6:694-698 N-D '59. (MIRA 13:6)

1. Rekomendovana kafedroy radiopriyemnykh ustroystv Leningradskogo elektrotekhnicheskogo instituta svyazi imeni prof. M.A. Bonch-Bruyevicha.
(Radio--Interference)

9,9300

2651

S/044/61/000/004/029/033
C111/C222

AUTHOR: Krasovskiy, R.R.

TITLE: On the distortion of the signal for a tropospherical scattering

PERIODICAL: Referativnyy zhurnal. Matematika, no. 4, 1961, 21, abstract 4 V 198 ("Tr. Nauchno-tekhn. konferentsii Leningr. elektrotekhn. in-ta svyazi. Vyp. 3". L., 1959, 38-40)

TEXT: The author determines the mean statistic amplitude and phase versus frequency response characteristics of a channel which uses the tropospherical scattering. Therefore the correlation function and the spectral density of the function

$$\xi(t) = E(t) \cos[\omega_0 t + \varphi(t)]$$

is calculated, where $E(t)$ and $\varphi(t)$ are independent random processes with given probability characteristics, and ω_0 is a constant.

[Abstracter's note: Complete translation.]

Card 1/1

S/194/61/000/001/032/038
D216/D304

6.9200

AUTHOR: Krasovskiy, R.R.

TITLE: Signal reception at random changes of the channel parameters

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 1, 1961, 13, abstract 1 K116 (Tr. Leningr. elektrotekhn. in-ta svyazi, 1959 (1960), no. 7 (44), 101-107)

TEXT: The correlation method has been used to evaluate the spectrum at the output of a linear and of a quadratic detector, where the input signal is of one polarity, modulated by a multi-channel communication and which had been transmitted through a channel undergoing random changes of its parameters. The obtained expressions for the LF-components spectra permit evaluation of the distortion of the signal which is transmitted through a channel with randomly varying parameters. 8 references.

Card 1/1

KRASOVSKIY, K. R., Cand Tech Sci -- (diss) "Research into distortions in radio lines using tropospheric scattering." Leningrad, 1960. 11 pp; (Ministry of Communications USSR, Leningrad Electrical Engineering Inst of Communications im Prof M. A. Bonch-Bruyevich); 200 copies; price not given; (KL, 26-60, 136)

KRASOVSKIY, R. R.,

"Investigation of Distortions in Radio Lines Using Tropospheric Scattering" Dissertation for the Degree of Candidate of Sciences, Leningrad Electrotechnic Inst. of Communication im. M. A. Bonch-Bruyevich. Defense hedl on 23 June 1960.

A statistical analysis was made of the characteristic of the channels and an analysis of signal distortion in a channel.

An estimate is presented of the distortion in the transimision of a single-bend signal with modulation by a broadband message, and an expression is obtained for the correlation function of the signal at the output of the detector.

Izv Vysshikh ucheb. zaved MViSSO SSSR po razdelu Radiotekhnika, vol. 6, No. 1, 1963, p. 98-102 (original checked--Cand. of Sciences as in original.)

KALABINA, A.V.; TYUKAVKINA, N.A.; MANTSIVODA, G.P.; KRASOVSKIY, R.V.

Polymerization of vinyl aryl ethers and their derivatives. Part 2: Ionic polymerization of vinyl aryl ethers. Vysokom.soed. 3 no.8: 1150-1154 Ag '61. (MIRA 14:9)

1. Irkutskiy gosudarstvennyy universitet imeni A.A.Zhdanova.
(Ethers) (Polymerization)

KRASOVSKIY, S., marshal aviatsii, Geroy Sovetskogo Soyuza

During the Kursk battle. Kryl.rod. 14 no.7:18-20 Jl '63.
(MIRA 16:9)
(World War, 1939-1945--Aerial operations)

KRASOVSKIY, S., marshal aviatsii

Invincible and legendary. Av. i kosm. no.2:2-7 F '66.
(MIRA 19:1)

KRASOVSKIY, S.A.; KONEVKIN, I.I.; TATARCHEVSKIY, V.F., redaktor; KEL'-NIK, V.P., redaktor; KOVALENKO, N.I., tekhnicheskiy redaktor.

[Rapid repair of open-hearth furnaces] Skorostnye remonty martenovskikh pechei. Sverdlovsk, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1954. 196 p. (MLRA 8:1)
(Open-hearth process)

KRASOVSKIY, S.A.

PHASE I BOOK EXPLOITATION SOV/4601

Koordinatnoye soveshchaniye po primeneniyu kisloroda na metallurgicheskikh zavodakh Urala. Sverdlovsk, 1956

Primeneniye kisloroda na metallurgicheskikh predpriyatiyakh Urala; materialy koordinatsionnogo soveshchaniya (Use of Oxygen in Metallurgical Plants of the Urals; Materials of the Coordination Conference) Sverdlovsk, 1960. 152 p. Errata slip inserted. 1,000 copies printed.

Sponsoring Agencies: Akademiya nauk SSSR. Ural'skiy filial. Institut metallurgii; Ural'skiye pravleniya nauchno-tekhnicheskikh obshchestv chernoy i tsvetnoy metallurgii.

Resp. Ed.: P.S. Kusakin, Candidate of Technical Sciences; Tech. Ed.: N.F. Seredkina.

PURPOSE: This collection of papers is intended for scientific research and technical personnel in the field of metallurgy.

COVERAGE: The use of oxygen in ferrous and nonferrous metallurgy of the Urals is discussed. Results of experimental use of oxygen in some metallurgical plants are presented. During the Conference, held December 20 and 21, 1956, the following persons (in addition to the authors) took part in the discussion: V.Ya. Miller, V.V. Mikhaylov, P.Ya. Sorokin, A.A. Parestoronin (all affiliated with the Institute of Metallurgy of the Ural Branch AS USSR), S.M. Kazachenko (Nizhne-Saldinskiy metallurgicheskiy zavod - Nizhnyaya-Salda Metallurgical Plant), M.F. Kochin (Deceased) (Ural'skiy institut chernykh metallov - Ural Institute of Ferrous Metals), M.Ya. Kisiltsin (Chelyabinskiy metallurgicheskiy zavod - Chelyabinsk Metallurgical Plant), O.V. Demin (Krasnoural'skiy medeplavil'nyy zavod - Krasnoural'sk Copper Smelting Plant), V.A. Aglitskiy (Institut Unipromed' - "Unipromed'" Institute). Some of the papers are followed by references, both Soviet and non-Soviet.

KRASKOVSKIY, S.A., kand.geol.-mineral.nauk

"Measurements of thermal conductivities of rocks by observations in boreholes" by A. Beck, J.C. Jaeger, Q. Newstand. Reviewed by Kraskovskii. Izv. vys. ucheb. zav.; pri. no.1:134-135 '58.
(MIRA 11:5)

(Rocks) (Heat--Conduction--Measurements)
(Beck, A.) (Jaeger, J.C.) (Newstand, Q.)

KRASOVSKIY, Stepan Akimovich, marshal aviatsii, Geroy Sovetskogo Soyuza; SMOLIN, V.N., red.; ANIKINA, R.F., tekhn.red.

[Life in the Air Force] Zhizn' v aviatsii. Moskva, Voen.izd-vo M-va obor.SSSR, 1960. 262 p. (MIRA 13:8)
(Russia--Air force)

KRASOVSKIY, S.K.

Postembryonic development of the skull of the emperor penguin. Issl. fauny morei 2:387-427 '64. (MIRA 17:10)

1. Zoologicheskiy institut AN SSSR.

KRASOVSKIY, S.A., marshal aviatsii, Geroy Sovetskogo Soyuza,

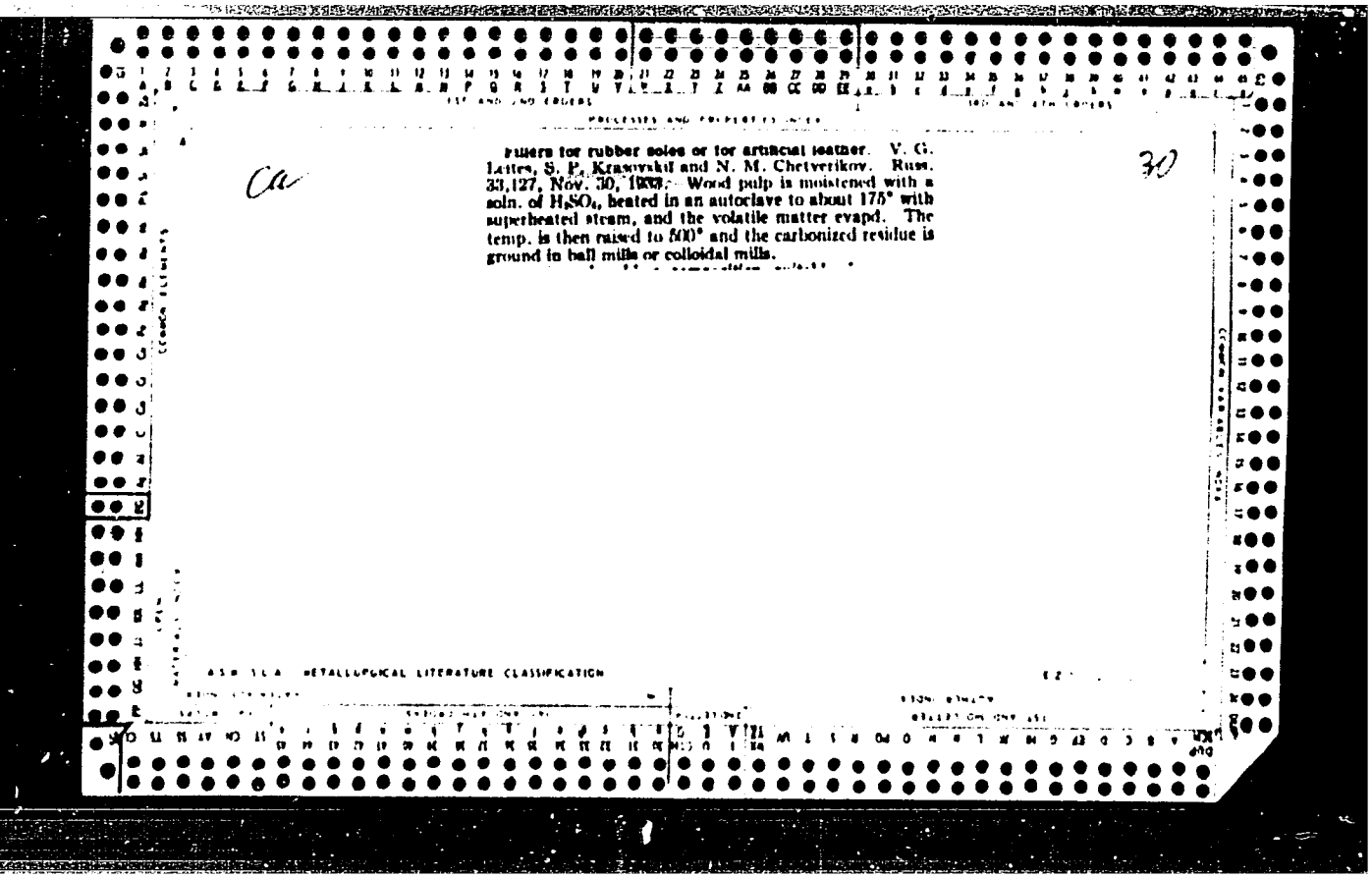
From the Don to the Elbe. Av. i kosm. 47 no.3:73-78 Mr '65.
(MIRA 18:3)

1. Byvshiy komanduyushchiy 2-y Vozdushnoy armiyey.

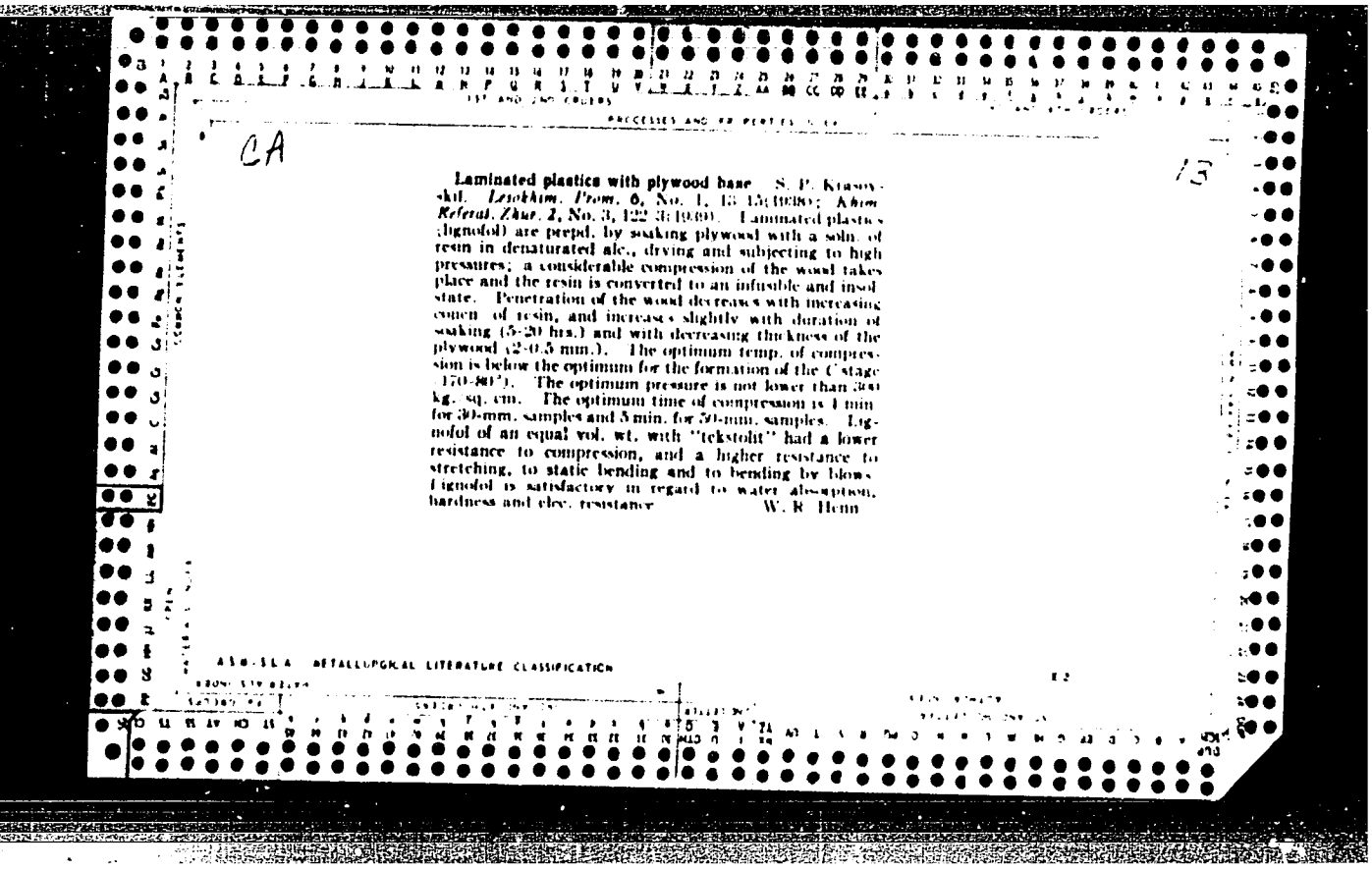
KOZLOVSKIY, V.A., inzh.; KRASOVSKIY, S.N., inzh.

Laying of rail lengths without end cutting. Put' i put.khoz. 9 no.5:8-12 '65. (MIRA 18:5)

1. Nachal'nik putevoy mashinnoy stantsii No.75, stantsiya Gatchina, Oktyabr'skoy dorogi (for Kozlovskiy). 2. Stantsiya Gatchina, Oktyabr'skoy dorogi (for Krasovskiy).



Fillers for rubber soles or for artificial leather. V. G. Lattes, S. F. Krasovskii and N. M. Chetverikov. Russ. 33,127, Nov. 30, 1933. Wood pulp is moistened with a soln. of H_2SO_4, heated in an autoclave to about 175° with superheated steam, and the volatile matter evapd. The temp. is then raised to 500° and the carbonized residue is ground in ball mills or colloidal mills.



CA

15

Laminated plastics with plywood base. S. P. Krasovskii. *Izobkim. Prom.*, 6, No. 1, 13-15(1938); *Khim. Referat. Zhur.* 2, No. 3, 122-3(1939).—Laminated plastics (lignofol) are prepd. by soaking plywood with a soln. of resin in denaturated alc., drying and subjecting to high pressures; a considerable compression of the wood takes place and the resin is converted to an infusible and insol. state. Penetration of the wood decreases with increasing concn. of resin, and increases slightly with duration of soaking (5-20 hrs.) and with decreasing thickness of the plywood (2-0.5 mm.). The optimum temp. of compression is below the optimum for the formation of the C stage (150-80°). The optimum pressure is not lower than 300 kg. sq. cm. The optimum time of compression is 1 min. for 30-mm. samples and 5 min. for 50-mm. samples. Lignofol of an equal vol. wt. with "tekstolit" had a lower resistance to compression, and a higher resistance to stretching, to static bending and to bending by blows. Lignofol is satisfactory in regard to water absorption, hardness and elec. resistance. W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1. KRASOVSKIY, S. P., Engr.

2. USSR (600)

4. Plywood

7. Technology of plywood manufacture.
Der. i iosokhim. 1 No. 3, 1952

9. Monthly Lists of Russian Accessions, Library of Congress, March 1953, Unclassified.

KRASOVSKIY, S. P.

ZABRODKIN, Aleksandr Gavrilovich, kandidat tekhnicheskikh nauk, laureat Stalinskoy premii; KRASOVSKIY, S.P., retsenzent; LEBEDEV, V.S., retsenzent; SMIRNOV, A.V., redaktor; KARASIK, N.P., tekhnicheskiy redaktor.

[Chemistry and techonology of adhesives] Khimiia i tekhnologiia kleevykh veshchestv. Moskva, Goslesbumizdat, 1954. 220 p. (Adhesives)
(MLRA 7:12)

KRASOVSKIY, S.P., redaktor; ZAGOSKINA, G.V., redaktor; SHENDAREVA, L.V., tekhnicheskiy redaktor

[Manufacture of wood-shaving boards] Proizvodstvo drevesno-struzhechnykh plit. Moskva, TSentral'noe biuro tekhn.informatsii, 1957. 42 p. (MLRA 10:8)

1. Russia (1923- U.S.S.R.) Ministerstvo bumazhnoy i derevoobrabatyvayushchey promyshlennosti (Paperboard)

KRASOVSKIY, S.S.

Sources of errors in conducting medium and large scale magnetic surveys. Geofiz. sbor. no.3:54-65 '62. (MIRA 15:9)
(Magnetic prospecting)

KRASOVSKIY, S.S.

Conducting magnetic surveys with the creation of a net of magnetic benchmarks. Geofiz. sbor. no.3:66-72 '62. (MIRA 15:9)
(Magnetic prospecting)

KRASOVSKIY, S.S.

Use of over-all detailed geophysical studies in investigating the Pokrovo-Kireyevo structure. Geofiz. sbor. no.3:129-139 '62. (MIRA 15:9)

(Pokrovo-Kireyevo Region—Prospecting—Geophysical methods)

GEVORK'YAN, V.Kh. [Hevork'ian, V.Kh.]; ORSA, V.I.; KRASOVSKIY, S.S. [Krasovs'kyi, S.S.]

Second Conference of the Young Geologists of the Ukraine, April 17-22, 1962. Geol.zhur. 23 no.1:113-116 '63. (MIRA 16:4)
(Ukraine—Geology)

KRASOVSKIY, S.S.; BUR'YANOV, V.B.

Magnetic field of two vertical strata. Geofiz. sbor. no.7:86-91 '64. (MIRA 17:11)

1. Institut geofiziki AN UkrSSR.

KRASOVSKIY, S.S.; BUR'YANOV, V.B.

Usability of certain nomograms in magnetometry. Geofiz. sbor. no.7: 97-104 '64. (MIRA 17:11)

1. Institut geofiziki AN UkrSSR.

KRASOVSKIY, S.S.

Criteria for the identification of transverse tectonic disturbances with a small shift using magnitometry. Geofiz. sbor. no.8:88-91 '64. (MIRA 18:6)

1. Institut geofiziki AN UkrSSR.

KRASOVSKIY, Sergey Sergeyevich; SUBBOTIN, S.I., akademik, otv. red.; BYCHKOVA, R.I., red.; SHARAY, N.Ya., red.

[Methods of extending geophysical studies in geological mapping; as revealed by a study made in the Azov crystalline massiv and its conjugated zone with the Donets Basin] Metodika kompleksirovaniia geofizicheskikh issledovanii pri geologicheskom kartirovanii; na primere Priazovskogo kristallicheskogo massiva i zony sochleneniia ego s Donbassom. Kiev, Naukova dumka, 1965. 142 p. (MIRA 18:12)

1. Akademiya nauk Ukr.SSR (for Subbotin).

L 02010-67 EWT(1) GW

ACC NR: AM6006730 Monograph UR/

Krasovskiy, Sergey Sergeyevich

21
12 B+1.

Methods of complexing geophysical studies in geological mapping; based on the Priazov crystalline mountain range and zones of its connection with the Donets Basin (Metodika kompleksirovaniya geofizicheskikh issledovaniy pri geologicheskom kartirovanii; na primere Priazovskogo kristallicheskogo massiva i zony sochleneniya yego s Donbassom) Kiev, Naukova dumka, 65. 0142 p. illus., biblio. (At head of title: Akademiya nauk Ukrainskoy SSR. Institut geofiziki) 1,200 copies printed.

TOPIC TAGS: geology, geologic survey, prospecting, stratigraphic mapping, geographic survey, ground survey, geophysic research facility

PURPOSE AND COVERAGE: On the basis of analysis of geophysical and geological studies of Priazov parts of Ukrainian crystalline range and zone of Priazov mountain range and Donets Basin, the possibilities are being studied of different geophysical methods for the solution of problems of mid scale geological mapping. The selection is made of rational system found in the connection of physico-geological conditions. The mistakes made while surveying are being studied; the method of putting up of bearing area for large and mid scale surveying is being studied. The book is recommended for geophysicists, and geologists of research and industry institutions, for techers and students of higher courses at institutes of higher learning.

Card 1/2

L 02010-67

ACC NR:AM6006730

TABLE OF CONTENTS (abridged):

SUB CODE: 08 SUBM DATE: 30Sep65/ ORIG REF: 114/ OTH REF: 006

Card 2/2

BURMISTROV, S.I.; KRASOVSKIY, V.A.

Alkylation of 2-amino-4-methylthiazole with secondary and tertiary alcohols. Zhur.ob.khim. 34 no.2:685-687 F '64. (MIRA 17:3)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut.

BURMISTROV, S.I.; KRASOVSKIY, V.A.

Alkylation of aminothiazoles. Part 3: Alkylation of 2-methylamino-4-methylthiozole. Zhur. org. khim. 1 no.1:183-185 Ja '65. (MIRA 18:5)

1. Dnepropetrovskiy khimikotekhnologicheskiy institut.

SEDOV, L.I., akademik; KRASOVSKIY, V.A., kand.fiz.-matem.nauk

Fourteenth Congress of the International Astronautical Federation (IAF). Vest. AN SSSR 34 no.3:120-121 Mr '64. (MIRA 17:4)

BURMISTROV, S.I.; KRASOVSKIY, V.A.

Alkylation of aminothiazoles. Part 2:Alkylation of 2-amino-thiazole. Zhur. ob. khim. 34 no.11:3822-3824 N '64
(MIRA 18:1)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut.

KOTLYARENKO, B.M., vrach; GLUSKER, M.S., vrach; TAMARKIN, I.D., vrach; KRASOVSKIY, V.A., vrach

Results of a house-to-house study of the population for goiter incidence. Zdrav. Bel. 7 no.9:63-64 S '61. (MIRA 14:10)

1. Iz Gomel'skogo oblastnogo protivozobnogo dispansera (for Kotlyarenko, Glusker, Tamarkin). 2. Respublikanskiy protivozobnyy dispanser, Belorussiya (for Krasovskiy).
(GOMEL' PROVINCE--GOITER)

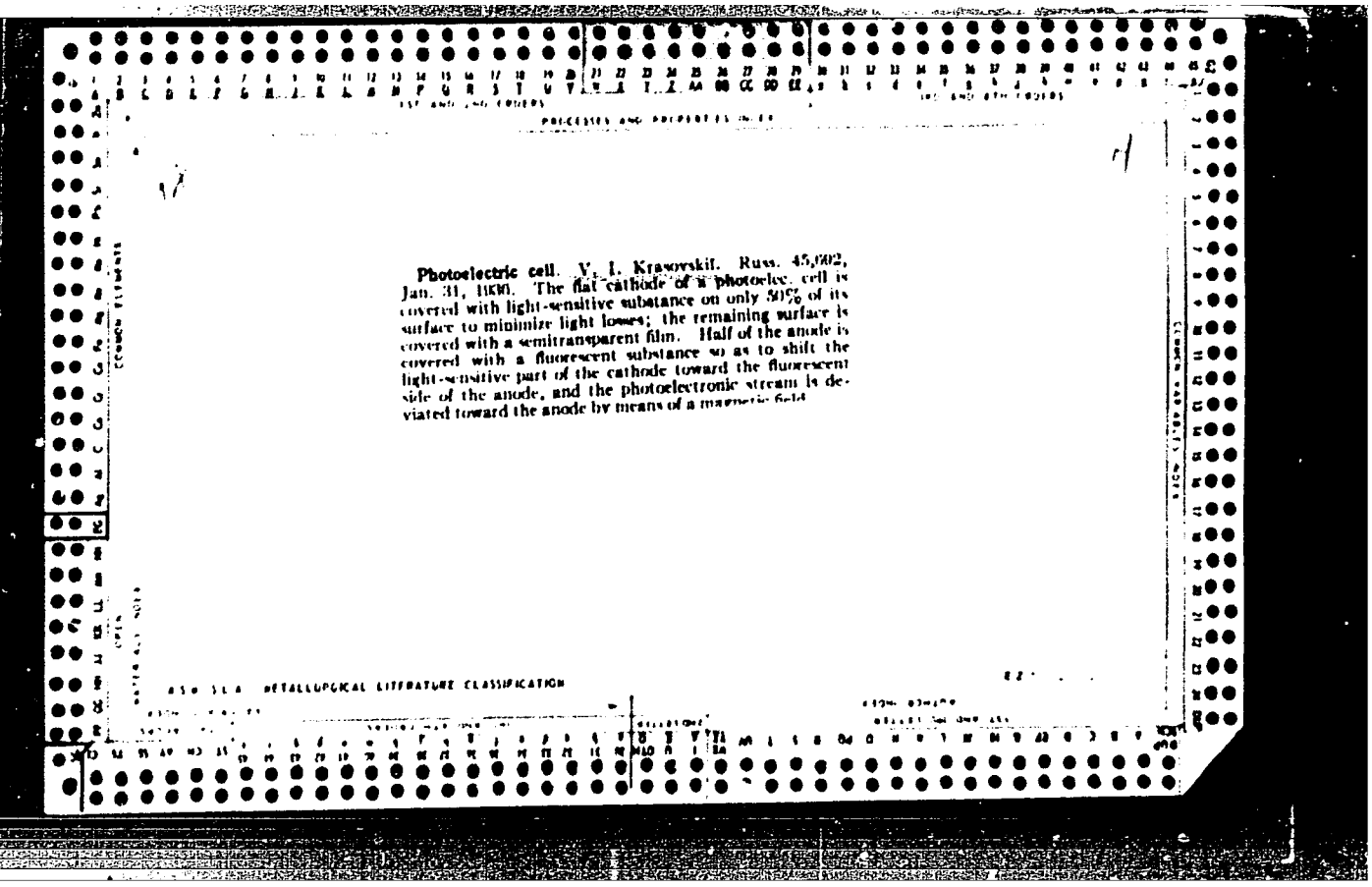
DASHKEVICH, L.L.; SURAZHSKIY, D.Ya.; USOL'TSEV, V.A.; AZBEL', M.Ye.; BOZHEVIKOV, S.N.; VORZHENEVSKIY, M.S.; MANUYLOV, K.N.; GLAZOVA, Ye.F.; KARPUSHA, V.Ye.; PROTOPOPOV, N.G.; SHADRINA, Ye.N.; IGRUNOV, V.D.; NECHAYEV, I.N.; BESPALOV, D.P.; ILLARIONOV, V.I.; GLEBOV, P.A.; GLAZOVA, Ye.F.; KAULIN, N.Ya.; GORYSHIN, V.I.; GAVRILOV, V.A.; TIMOFEYEV, M.P., retsenzent; YEFREMYCHEV, V.I., retsenzent; KRASOVSKIY, V.B., retsenzent; V'YUNNIK, A.P., retsenzent; STERNZAT, M.S., otv. red.; RUSIN, N.P., otv. red.; YASNOGORODSKAYA, M.M., red.; VOLKOV, N.V., tekhn. red.

[Instructions to hydrometeorological stations and posts] Nastavlenie gidrometeorologicheskim stantsiiam i postam. Leningrad, Gidrometeoroizdat. No.3. Pt.3. [Meteorological instruments and observation methods used on a hydrometeorological network] Meteorologicheskie pribory i metody nabliudenii, primeniaemye na gidrometeorologicheskoi seti. 1962. 295 p. (MIRA 15:5)

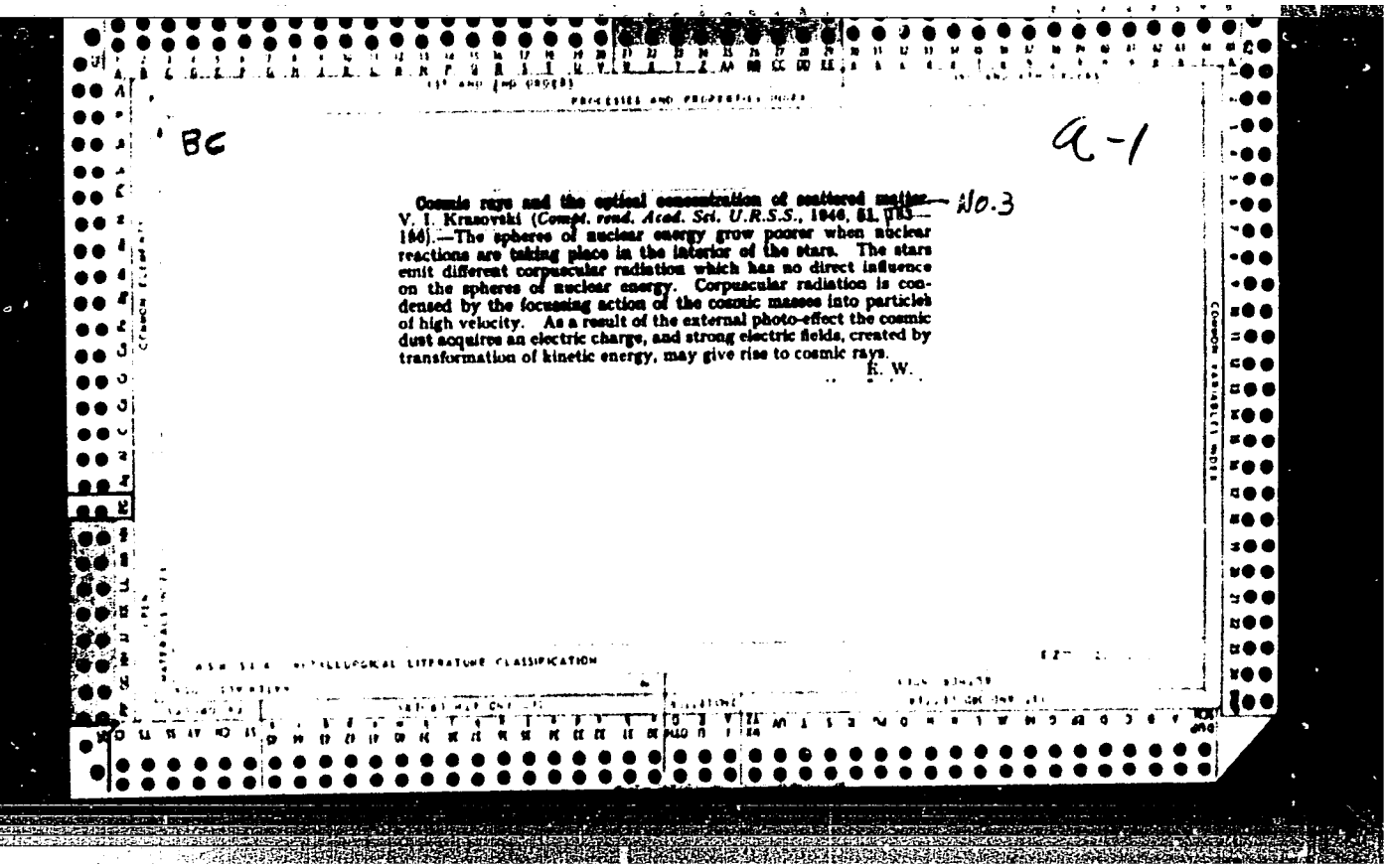
(Continued on next card)

DASHKEVICH, L.L.— (continued) Card 2.

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye gidrometeorologicheskoy sluzhby. 2. Glavnaya geofizicheskaya observatoriya Nauchno-issledovatel'skogo instituta gidrometeorologicheskikh priborov i Gosudarstvennogo gidrologicheskogo instituta (for Dashkevich, Surazhskiy, Usol'tsev, Azbel', Bozhevikov, Vorzhenevskiy, Manuylov, Glazova, Karpusha, Protopopov, Shadrina, Igrunov, Nechayev, Bespalov, Illarionov, Glebov, Glazova, Kaulin, Gorysnin, Gavrilov). 3. Komissiya Glavnogo upravleniya gidrometeorologicheskoy sluzhby pri Sovete Ministrov SSSR (for Nechayev, Usol'tsev, Timofeyev, Yefremychev, Krasovskiy, V'yunnik)
(Meteorology)



Photoelectric cell. V. I. Krasovskii. Russ. 45,902, Jan. 31, 1936. The flat cathode of a photoelec. cell is covered with light-sensitive substance on only 30% of its surface to minimize light losses; the remaining surface is covered with a semitransparent film. Half of the anode is covered with a fluorescent substance so as to shift the light-sensitive part of the cathode toward the fluorescent side of the anode, and the photoelectronic stream is deviated toward the anode by means of a magnetic field.



BC

Q-1

Cosmic rays and the optical concentration of scattered matter. V. I. Krasovski (*Compt. rend. Acad. Sci. U.R.S.S.*, 1946, 51, 183—186).—The spheres of nuclear energy grow poorer when nuclear reactions are taking place in the interior of the stars. The stars emit different corpuscular radiation which has no direct influence on the spheres of nuclear energy. Corpuscular radiation is condensed by the focussing action of the cosmic masses into particles of high velocity. As a result of the external photo-effect the cosmic dust acquires an electric charge, and strong electric fields, created by transformation of kinetic energy, may give rise to cosmic rays.

K. W.

No. 3

KRASOVSKIY, V. I., NIKONOV, V. B. and KALINYAK, A. A.

Nablyudeniye oblasti galaktícheskogo tsentra v infrakrasnykh luchakh (Observation of the Galactic Center Region in Infrared Rays). Akademiya Nauk SSSR. Doklady, 1949, v. 66, no. 1, p. 25-28, diagr., 6 refs.

AS262.S3663 v. 66

KRASOVSKIY, V. I.

50/49T94

USSR/Physics
Radiation

May 49

"Nocturnal Radiation of the Sky in the Infrared Region of the Spectrum," V. I. Krasovskiy, 1½ pp

"Dok Ak Nauk SSSR" Vol LXVI, No 1, pp. 53-4

Gives results of photographing the spectrum of luminescence of the nocturnal sky with the aid of a spectrograph with two glass prisms and a dispersion of 7,000 angstroms with lambda = 10,000/11,000 angstrom/mm, and an electron-optical transformer. Submitted by A. A. Lebedev, 25 Jeb 49.

50/49T94

KRASOVSKIY, V. I.

Meteorological Abst.
Vol. 5 No. 1
Jan. 1954
Part 1
Radiation and
Temperature

5.1-162

551.521.4

Krasovskii, V. I., Novye izluchenila nochnogo neba na uchastke 8000-11,000 A. [New radiation of the night sky in a zone of 8000- 1,000 A.] Akademiia Nauk, SSSR, Krymskaia Astrofizicheska a Observatoriia, Izvestila, 5:100-104, 1950. 3 figs., 5 refs. DLC--A three-prism spectrograph with linear dispersion of about 1200-2400 A on 1 mm was constructed for observations during 1950. These observations led to the discovery of six new lines for emission with wave length of 8870, 9391, 9976, 10, 217, 10, 374 and 10, 827 A. It was found that heavy emissions of night sky are present for many sections inside this range. Subject Heading: 1. Night sky spectrum.--N.T.Z.

Translation 563989

KRASOVSKIY, V.I.

"Nature of Radiation of the Night ~~Sky~~ Sky" Krasovskiy, V.I.

VAN, No 11, Nov 1950 pp 99

KRASOVSKIY, V. I.

PA 165T25

USSR/Geophysics - Night Sky 21 Feb 50

"New Facts on the Radiation of the Night Sky in the Region 8,800 to 11,000 Angstroms," V. I. Krasovskiy, Crimean Astrophys Obs, Acad Sci USSR

"Dok Ak Nauk SSSR" Vol LXX, No 6, pp 999-1000

In 1949, Crimean Astrophys Obs in Simeyz obtained 12 more or less satisfactory photographs of spectrum of the night sky in range from 8,800 to 11,000 A. Employed special method of photography using electronic-optic transformer. Photographs revealed number of new lines, bands, or blends. Submitted 28 Nov 49 by Acad G. A. Shayn.

165T25

KRASOVSKIY, V. I.

USSR/Astronomy - Night Sky 1 Aug 50

"Nature of Infrared Radiation of Night Sky," V. I. Krasovskiy, Crimean Astrophys Obs, Acad Sci USSR

"Dok Ak Nauk SSSR" Vol LXXIII, No 4, pp 679-682

Structure of subject radiation has finally been successfully observed. Obtained photograph of its spectrum up to 11,000 A. S. F. Rodionova has shown that energy of radiation near 10,000 A is twice that of green line 5,577 A of night-sky radiation. Graph shows intensity vs wave length. Concludes atomic nitrogen exists where there is still mol oxygen and consequently accompanies atomic oxygen in upper air. Submitted 27 May 50 by Acad G. A. Shayn.

176T3

KRASOVSKIY, V.I.

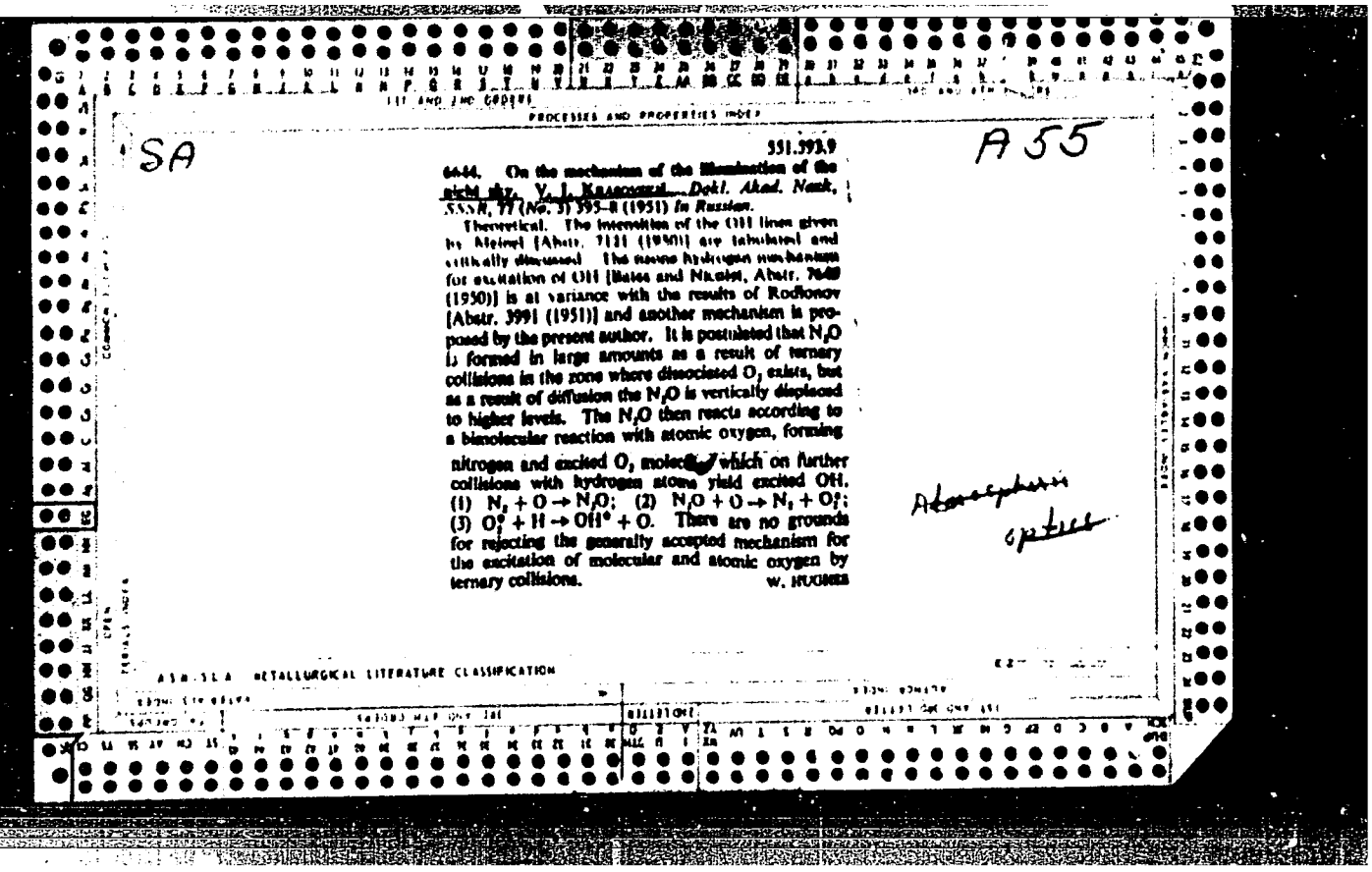
"Observation of the Region of Galactic Center in Radiation (Emission) of About 10,000 Angstroms" Krasovskiy, V.I. and A.A. Kalinyak, and V.B. Nikonov.
SO: Izv. Krym Astr. Obs., No 6, 1951 pp 119.

KRASOVSKIY, V. I.

LUKASHENIYA, V. T. and KRASOVSKIY, V. I.

"Details of the Night Sky Spectrum from 9500 A to 12,000 A," Dok Ak Nauk SSSR, 74, No 2, pp 241-44, 1951

F-TS-7740-RE Translation



SA

551.593.9

A 55

64-44. On the mechanism of the illumination of the night sky. V. I. Krasovskii. *Dokl. Akad. Nauk, SSSR, 77 (No. 3) 395–8 (1951) In Russian.*

Theoretical. The intensities of the OH lines given by Meinel [Abstr. 7121 (1950)] are tabulated and critically discussed. The recent hydrogen mechanism for excitation of OH [Bates and Nicolet, Abstr. 7648 (1950)] is at variance with the results of Rodionov [Abstr. 3991 (1951)] and another mechanism is proposed by the present author. It is postulated that N_2O is formed in large amounts as a result of ternary collisions in the zone where dissociated O_2 exists, but as a result of diffusion the N_2O is vertically displaced to higher levels. The N_2O then reacts according to a bimolecular reaction with atomic oxygen, forming nitrogen and excited O_2 molecules which on further collisions with hydrogen atoms yield excited OH. (1) $N_2 + O \rightarrow N_2O$; (2) $N_2O + O \rightarrow N_2 + O_2^*$; (3) $O_2^* + H \rightarrow OH^* + O$. There are no grounds for rejecting the generally accepted mechanism for the excitation of molecular and atomic oxygen by ternary collisions. W. HUGHES

Atmospheric optics

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

KRASOVSKIY, V. I.

USSR/Astronomy - Starlight 21 May 51

"Counting of Scintillations as Method of Astronomical Investigations," V. I. Krasovskiy, Crimean Astrophys Obs, Acad Sci USSR

"Dok Ak Nauk SSSR" Vol LXXVIII, No 3, pp 427-429

S. F. Rodionov ("Dok Ak Nauk SSSR" Vol LXXIV, No 3) first employed app called "photon counter" for counting of scintillations. This was improved by L. A. Kubetskiy by adding secondary electron counter. Submitted by Acad G. A. Shayn 26 Mar 51.

186T2

KRASOVSKIY, V. I.

"The Effect of Water Vapors and Carbon and Nitrogen Oxides on Night-Sky Luminescence," presented to the Academy of Sciences of the USSR by Academician G. A. Shayn, 26 Mar 51. Published in Dok. Akad. Nauk SSSR, Vol. LXXVIII, No. 4, 1951, pp 669-672.

KRASOVSKIY, V. I.

USSR/Geophysics - Night Sky 11 Jul 51

"Details of the Spectrum of the Night Sky From 9,500 to 12,000 Angstroms," V. T. Lukashenyan, V. I. Krasovskiy, Crimean Astrophys Obs

"Dok Ak Nauk SSSR" Vol LXXIX, No 2, pp 241-244

Thanks Acad A. N. Terenin for his kind cooperation in the obtaining of the diffraction lattices and replicas, which were necessary to obtain the new spectra of the radiation from the night sky. Submitted 15 May 51 by Acad G. A. Shayn.

214T35

KRASOVSKIY, V. I.

USSR/Geophysics - Night-Sky Illumination 11 Oct 51

"Problem Concerning the Identification of the Spectrum of the Night Sky Around 10,000 Angstrom," V. I. Krasovskiy, V. T. Lukashenya, Crimean Astrophys Obs, Acad Sci USSR

"Dok Ak Nauk SSSR" Vol LXXX, No 5, pp 735-738

Gives the scheme of upper-air mol interactions (on the basis of O_2 and N_2O) to account for the night-sky spectrum. Thanks Prof B. I. Stepanov for his advice in this problem. Submitted 20 Aug 51 by Acad G. A. Shayn.

221T54

Translation - 2524467, 30 Apr 54

The reproducibility of the night-sky spectrum around 8000 9000 A obtained by Meinel. V. I. Lukashova and V. I. Krasovskii. *Doklady Akad. Nauk S.S.S.R.* 81, 811 [1951]. Differences between Meinel's spectra and the authors' may be due to real differences in the radiation, but data are too meager to permit drawing any conclusions.
Cyrus Feldman

Translation 2524467, 30 Apr 54

1. KRASOVSKIY, V. I.

2. USSR (600)

4. Astrophysics

7. Investigation of infra-red radiation of night sky. Usp. fiz. nauk. 47 no. 4, 1952

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

KRASOVSKIY, V. I.

"Infrared Radiation of the Night Sky and the Aurora Borealis," B. A. Bagaryatskiy, V. I. Krasovskiy, and M. I. Mordukhovich, Doklady Akad Nauk USSR 82: 579-580, No. 4 1952.

This paper is well written and seemingly original, with apparently reliable results. Bagaryatskiy and Mordukhovich are both new in this field, this being their first paper in the journal. Krasoviskih is well experienced in the field, having published five papers since the end of 1948.

Translation - 25 24467, 30 Apr 54
B- 75105, 4 May 54

KRASOVSKIY, V.I.

USSR

523.161

7923. Some properties of cosmic dust. V. I. KRASOVSKII. *Dokl. Akad. Nauk SSSR*, 89, No. 5, 805–8 (1953) *In Russian.*

Discusses the charges and other properties of dust particles and concludes that (1) the effective section of the charged cosmic-dust particles for their collisions with the clouds of ionized gas is greater than their gas-kinetic (geometrical) section, (2) condensation of the interstellar ionized gas near the stars on positively charged particles is little probable, (3) condensation of the interstellar ionized gas occurs more readily on neutral and negatively charged particles, i.e. in regions of the cosmic space characterized by a small density of ultraviolet radiation, and (4) condensation of neutral interstellar gas is possible on both positive and negative particles. Collisions of particles among themselves and possibilities of change of charge are also discussed.

F. LACHMAN

KRASOVSKIY, V. I.

USSR.

Interaction of dusty and gaseous interstellar matter. V. I. Krasovskii. *Doklady Akad. Nauk SSSR*, 92, No. 5, 907-10 (1953). In Russian.

Discusses the effect of the concentration of interstellar dust on the ionization and dissociation of interstellar gas. The neutralization of H II can occur as a result of collisions either with electrons or with neutral or charged dust particles. These particles in a heated ionized interstellar gas, which consist, e.g., of Si or Fe oxides, are probably covered with a thin layer of the reduced element, owing to the (chemical) adsorption of atomic H. In the conditions of interstellar space, each collision between H and a dust particle carrying adsorbed H atoms will result either in formation and evaporation of H_2 or in adsorption of H in the holes of the monatomic Si (Fe) film. In cold interstellar gas (~ 100°K), a recombination of this kind will only occur with very few atoms whose energy E exceeds $10\,kT$. Hence a relatively large-scale formation of molecules on dust particles is only possible in regions with a high-density or high-temperature gas, but is not possible in cold and rarefied gas. The energy of such dust particle is probably higher than the mean kinetic energy of molecules of the surrounding gas. In the vicinity of hot stars, where there is little dust matter, it is the electrons that are mainly responsible for the neutralization of H II, and the radio-temperature of H I can be higher than in regions with much dust. The distribution and compression of interstellar dust should vary in the cosmic space according to differences in the field and electron pressures.

KRASOVSKIY, V. I.

USSR/Physics - Infrared radiation

Card 1/1 Pub. 118 - 4/8

Authors : Krasovskiy, V. I.

Title : About infrared radiation of the night sky

Periodical : Usp. fiz. nauk 54/3, 469-494, Nov 1954

Abstract : An analysis of the infrared radiation of the night sky is presented. Works of various scientists, who studied the infrared radiation of the night sky, are discussed and criticized. Spectra of infrared radiation taken at various altitudes show the existence of oxygen and hydrogen in the upper layers of the atmosphere. The author believes that infrared radiation of the night sky is closely connected with the recombination of oxygen atoms formed by the photo dissociation at day time into molecules. He also believes that hydrogen of the high atmosphere layers playes an essential role in the previously mentioned recombination of oxygen atoms into the molecules. Seventy references 28-USSR (1932-1953). Tables.

Institution : ...

Submitted : ...

USSR/ Geophysics - Upper atmosphere

Card 1/1 Pub. 22 - 25/63

Authors : Krasovskiy, V.I.

Title : On the concentration of hydroxyl in the upper atmosphere

Periodical : Dok. AN SSSR 99/6, 979-981, Dec 21, 1954

Abstract : The concentration of hydroxyl molecules responsible for the generation of oxygen (O) atoms in the upper atmosphere is discussed on the basis of experimentally observed hydrozyl absorption bands in the spectrum of radiating atmosphere. Theories and assumptions of various scientists (Bates, Nikolet, etc.), devoted to atmospheric study on the probable number of oxygen atoms ($\approx 10^{n}$) are taken into account. Fourteen references; 7-USSR (1949-1954).

Institution: The Geophysical Institute of the Acad. of Scs. of the USSR

Presented by: Academician G.A. Gamburtsev, May 21, 1954

KRASOVSKIY, V. I.

"The Nature of Variations in Intensities of Emission in the Earth's Atmosphere," a paper presented at the 7th International Astrophysical Colloquium, Liege, 12-14 Jul 1956.

A brief analysis of the possible causes of variations in the intensity of night sky emission, originating as a result of a recombination of atoms into molecules in the upper atmosphere, is given.

SO: 568946

KRASOVSKIY, V.I., doktor fiziko-matematicheskikh nauk.

Sky brightness and auroras (from the International Geophysical Year program). Vest.AN SSSR 26 no.5:29-31 My '56. (MLRA 9:8)
(Auroras) (Sky, Color of)

KRASOVSKIY, V. I.

USSR/Cosmochemistry - Geochemistry. Hydrochemistry. D.

Abs Jour : Ref Zhur - Khimiya, No 9, 1957, 30338

Author : Krasovskiy, V.I.
Inst :
Title : Some Optical Manifestations of the Process of Oxigen Recombing in Upper Atmosphere

Orig Pub : Astron. zh., 1956, 33, No 4, 605-613

Abst : Literature survey and data of the author show that the ozone-hydrogen hypothesis of hydroxylic radiation of nocturnal sky involves a number of difficulties. Verification of hypothesis by exact determination of altitude of radiating layer has not been carried out so far. In adhering to the oxygen-hydrogen hypothesis the author points out that at an altitude of 100 km concentration of excitated oxygen molecules of normal state from 4-th to 27-th vibrational level has been evaluated at 10^7 cm^{-3}, which ensures the formation of about 2 . 10^{10}

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USSR/Cosmochemistry - Geochemistry. Hycrochemistry. D.

Abs Jour : Ref Zhur - Khimiya, No 9, 1957, 30338

hydroxyl molecules $cm^{-2}sec^{-1}$, even in the 1-km layer.

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KRASOVSKIY, V.I.

PHASE I BOOK EXPLOITATION 496

Akademiya nauk SSSR. Komitet po geodezii i geofizike

Mezhdunarodnaya assotsiatsiya geomagnetizma i aeronomii; tezisy dokladov na XI General'noy assambleye Mezhdunarodnogo geodezicheskogo i geofizicheskogo soyuza (The International Association of Geomagnetism and Aeronomy; Abstracts of the Reports at the XI General Assembly of the International Union of Geodesy and Geophysics) Moscow, Izd-vo AN SSSR, 1957. 46 p. 1,500 copies printed.

PURPOSE: This booklet is intended for dissemination of abstracts of papers presented by the Soviet members of the International Association of Geomagnetism and Aeronomy at the XI General Assembly of the International Union of Geodesy and Geophysics.

COVERAGE: This booklet with full English translation following the Russian text presents abstracts of papers, mainly on magnetics, telluric currents and aurorae, presented by Soviet contributors at the XI General Assembly of the International Union of Geodesy and Geophysics. It was published by the National Committee for Geodesy and Geophysics of the Academy of Sciences of the USSR.

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CONTENTS:

The International Association (Cont.) 496

Krasovskiy, V. I. The Nature of Radiation in the Upper Atmosphere. 13

Radiation at 100 km from the surface of the earth is connected with the dissociation and formation of molecules. Variations of intensity of radiation are connected with temperature and pressure fluctuations in the upper atmosphere. Primary and secondary radiation of aurorae and their nature are discussed. Secondary radiation can originate as a result of recombination processes, formation of an electric field, and chemical reactions of primary ions and excited products.

Shklovskiy, I. S. Elementary Processes in the Upper Atmosphere as Evidenced by Radiation 15

In addition to common fluorescence originating in the selective absorption of ultraviolet solar radiation by atoms in the atmosphere with subsequent reradiation of "softer" quanta, processes of resonance fluorescence take place in the upper atmosphere. With the detection of some lines in a twilight spectrum an estimate can be made of the number of Lyman quanta in short wave radiation from the sun.

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KRASOVSKIY, V. I.

PHASE I BOOK EXPLOITATION 338

Vtoroy sovetskiy iskusstvennyy sputnik Zemli; materialy, opublikovannyye v gazete "Pravda" (The Second Soviet Artificial Earth Satellite; Material Published in "Pravda") Moscow, Izd-vo "Pravda", 1957. 47 p. 100,000 copies printed.

PURPOSE: The booklet was written to give the public information on the second artificial earth satellite.

COVERAGE: The book consists of a number of articles on the second sputnik originally published in the Moscow newspaper "Pravda". Basic information on orbit, structure, equipment, performance, and utilization of the sputniks is given. All these data have been repeatedly published elsewhere; therefore, only a few figures are arbitrarily singled out here. The total weight of the scientific apparatus, test animal, and power supply sources of the second sputnik was 508.3 kg. The initial orbital velocity was about 8,000 m per second. The second sputnik circled

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The Second Soviet Artificial Earth Satellite (Cont.)

the earth initially in 103.7 minutes. Its radio transmitters operated on frequencies of 40.002 and 20.005 megacycles, etc. The last article quotes admiring comments of American, British, French, and Chinese scientists, statesmen, and journalists. The book contains 8 figures.

TABLE OF CONTENTS:

The Second Soviet Artificial Earth Satellite (Cont.)

KRASOVSKIY V. I.

AUTHOR: Krasovskiy, V. I. 49-4-9/23

TITLE: On the effective coefficient of recombination in the ionosphere. (Ob effektivnom koeffitsiente rekombinatsii v ionosfere).

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geofizicheskaya, 1957, No.4, pp. 504-511 (USSR)

ABSTRACT: It is shown that the exchange reaction O^+ with N_2 leads to the formation of the ions NO^+ in the ionosphere. This explains the observed value of the effective coefficient of recombination which turns out to be inversely proportional to the density of electrons and the ionising radiation. Exchange reactions in which ions take part and recombinations of molecular ions are accompanied by the dissociation of molecular nitrogen. The layer F_2 may exist during the night because of the conservation in the exosphere of electrons formed during the day in the lower layers, and the low value of the effective coefficient of recombination in this region. The coefficient of effective recombination may increase due to the effect of infrasound. It is concluded that since the coefficient of effective recombination depends on the

Card 1/2 electron concentration and the speed of formation of ions,

On the effective coefficient of recombination in the ionosphere.

it cannot be assumed that the coefficient is constant in time or has directional symmetry properties. Furthermore, since at large electron concentrations the coefficient of effective recombination depends on the nature of the primary ions and may, therefore, change substantially, it cannot be assumed that, during ionisation of the upper atmosphere by the corpuscular emission of the Sun, by meteors, or as a result of gas discharge processes, the effective coefficient of recombination will be the same in this case as in the case of photo-ionisation. Photo-ionisation is a more selective process than ionisation by the above three processes.
There are 14 references, 2 of which are Slavic.

SUBMITTED: September 21, 1956.
ASSOCIATION: Ac.Sc. U.S.S.R. Institute of Physics of the Atmosphere. (Akademiya Nauk SSSR Institut Fiziki Atmosfery).
AVAILABLE: Library of Congress.

AUTHOR: Krasovskiy, V. I.

TITLE: The nature of changes in the intensity of emission of the Earth's atmosphere. (Priroda izmeneniy intensivnosti emissiy zemnoy atmosfery).

PERIODICAL: "Izvestiya Akademii Nauk, Seriya Geofizicheskaya" (Bulletin of the Ac.Sc., Geophysics Series), 1957, No.5, pp. 664-669 (U.S.S.R.)

ABSTRACT: This paper was read at the International Symposium at Liege on June 12, 1956. An analysis is made of the influence on the emission of the Earth's atmosphere of the concentration of the initial products, the temperature, the pressure, the ultra-sonic waves from the troposphere, the solar activity and the intermixing in the atmosphere. Expressions are derived which allow an estimate to be made of the effect of thermal and tidal oscillations of the upper atmosphere on the emission of the night-sky. All chemical transformations which are responsible for the emission of the night-sky occur as a result of elementary chemical reactions at double or treble collisions of the molecules or atoms. The three component reactions are less sensitive to thermal and tidal oscillations of the upper atmosphere than the two-component reactions at activation energy. In the case of three-

The nature of changes in the intensity of emission of the Earth's atmosphere. (Cont.)

component reactions large changes are only possible for appreciable changes in temperature and volume which in fact may not occur. If the hydroxyl emission is a result of an ozone-hydrogen reaction (the speed of which is determined by the values assumed by Bates and Nicolit in Ref.7) then a ten-percent change in the temperature at 260 K will be accompanied by an approximately double fluctuation in the intensity of the hydroxyl emission. In the region of the temperature minimum, i.e. at a height of 80 km, it is assumed by Spenser and Dow (9) and Humphreys (8) that the temperature varies in the range 160 to 260 K. In this case a hundredfold change in the intensity of hydroxyl emission should occur but is apparently not observed. This shows that either the temperature changes are not present or that the hydroxyl emission originates outside this zone. If a decrease in temperature occurs in the upper atmosphere during the night then the emission connected with three-component reactions should increase. The opposite should be the case with two-component reactions at activation energy. Tidal effects may not be in phase with temperature changes and this may ensure a different behaviour of the intensity

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